***Weight Distributions for Grades 8***

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| **Domain** | **Grade 8** |
| **Ratios and Proportional Relationships** | **NA** |
| **The Number System** | **2-7%** |
| **Expressions and Equations** | **27-32%** |
| **Functions** | **22-27%** |
| **Geometry** | **20-25%** |
| **Statistics and Probability** | **15-20%** |
| **Total** | **100%** |

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|  | **Subject: Math**  **Grade Level: 8th**  **Unit Title: Number System** | | **Time frame Needed for Completion:**  **August 29, 2016 – September 16, 2016**  **14 days** | | |
| **Unit 1** | **Big Ideas:**  1. Know that there are numbers that are not rational, and approximate them by rational numbers.  2. Work with radicals and integer exponents.  ***Domain(s): THE NUMBER SYSTEM***  ***Standard(s):***  ***8.NS Know that there are numbers that are not rational, and approximate them by rational numbers.***  ***8.NS.1****. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.*  ***8.NS.2.****Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π2). For example, by truncating the decimal expansion of* √*2, show that* √*2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*  ***8.EE Work with radicals and integer exponents.***  ***8.EE. 1.*** *Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 × 3–5 = 3–3 = 1/33 = 1/27.*  ***8.EE. 2****. Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.*  ***8.EE.3.*** *Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger.*  ***8.EE. 4.*** *Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.* | | | | |
| **Mathematics Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | | | | |
| **Essential Question(s):**   * **How do you compare and order rational numbers?** * **How are rational and irrational numbers applied in the real world?** * **How do you compare and order irrational numbers?** * **What strategies can you use to compare and order rational and irrational numbers?** * **What are the subsets within the real number system?** * **What are the differences between rational and irrational numbers?** * **How would you describe and explain the rules of exponents?** * **How would you evaluate the square roots and cube roots?** * **How to convert scientific notation to standard form?** * **How to interpret scientific notation in real life situation?** | | | | |
| **Key Vocabulary:**  **(Content)** | | **Key Vocabulary:**  **(Academic)** | | |
| * Real Number * Rational Number * Irrational Number * Decimal Expansion * Fluent/Fluency * Square Root * Cube Root * Fractions * Quantity * Non-negative * Inequality * Scientific notation * Pythagorean Theorem * Coordinate System | * Expressions * Negative * Positive * Integers * Algebra * Identity Property * Associative Property * Commutative Property * Distributive Property * Order of Operations * Radicals and Exponents * Function * Distance | * Analyze * Write * Fluent/Fluency * Distinguish * Flexible * Covert * Define | * Interpret * Model * Represent * Describe * Effect * Explain * Compare * Contrast |
| **Concepts:**  **What Students Need to Know**:   * the number system   + irrational numbers * radicals and exponents   + square root   + decimal expansion   + cube root   + scientific notation * Pythagorean theorem | | **Skills:**  **What Students Need To Be Able To Do:**   * Differentiate rational and irrational numbers * CONVERT (decimal expansion to rational number * APPLY (properties of exponents) * SOLVE (word problems involving decimals and scientific notation ) * REPRESENT (problems using models and equations) * APPLY (pythagorean theorem) | | |
| **Instructional Strategies/Formative Assessment:**   * Discuss the BIG Question as it fits within the context of the lesson during the week. * Encourage students to use “I CAN” statements * Develop learning targets that are student friendly * Discuss learning targets with students * Develop foundational understand of vocabulary * Collect evidence to show mastery * Adjust instruction as needed based on collected evidence * Use the 5 E’s : * Engage * Explore * Explain * Elaborate * Evaluate | | | | |
| **Recommended Assessments:**  Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  DPI Resources  Computer Programs  Compare and order a list of fractions, decimals and percents.  Justification Notebook | | | | |
| **Recommended Resources:**  **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  ClassScape  Common Core Unpacking the Standards  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  <http://www.webmath.com/k8numlinecomp.html>  <http://www.learningwave.com/chapters/integers/numline.html>  <http://www.aaamath.com/g623_ex6.htm>  <http://www.aaamath.com/g623_ex7.htm>  [www.helpingwithmath.com](http://www.helpingwithmath.com)  <http://www.teachervision.fen.com/algebraic-expressions/printable/4334.html>  [www.internet4classrooms.com](http://www.internet4classrooms.com)  [www.helpingwithmath.com](http://www.helpingwithmath.com)  <http://www.ixl.com/math/grade-6/identify-representative-random-and-biased-samples>  <http://betterlesson.org/lesson/12478/tree-diagrams-fundamental-counting-principle>  <http://www.commoncore.org/_docs/math/6-8_curriculum_overview.pdf>  <http://www.livebinders.com/play/play/430659> | | | | |

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|  | **Subject: Math**  **Grade Level: 8th**  **Unit Title: Expressions & Equations** | | **Time frame Needed for Completion:**  **September 19, 2016 – November 18, 2016**  **44 days** | | |
| **Unit 2** | **Big Ideas:**   1. Understand the connections between proportional relationships, lines, and linear equations. 2. Analyze and solve linear equations and pairs of simultaneous linear equations.   ***Domain(s): EXPRESSIONS AND EQUATIONS***  ***Standard(s):***  ***8.EE Understand the connections between proportional relationships, lines, and linear equations.***  ***8.EE.5****. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*  ***8.EE.6****. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.*  ***8.EE Analyze and solve linear equations and pairs of simultaneous linear equations.***  ***8.EE.7****. Solve linear equations in one variable.*  *a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions.*  *Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).*  *b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms*.  ***8.EE.8.*** *Analyze and solve pairs of simultaneous linear equations.*  *a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.*  *b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.*  *c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.* | | | | |
| **Mathematics Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | | | | |
| **Essential Question(s):**   * **How would you graph equations?** * **How would you find the slope of a line?** * **How would you compare and contrast expressions and equations?** * **What is the purpose of expressing a number in different ways?** * **How would you explain an equation with no solution?** * **What are the rules in combining like terms?** * **How would you translate the words into the mathematical equations?** | | | | |
| **Key Vocabulary:**  **(Content)** | | **Key Vocabulary:**  **(Academic)** | | |
| * Linear Function * Rational Number * X - intercept * Y - intercept * Coordinates * Coordinate Plane * Slope * Slope Formula * Slope-intercept Form * Axis * Ordered Pairs * System of Equations * Substitution | * Linear Equation * Coefficients * Graphs * Variables * Expressions * Equations * Like Terms * Commutative Property * Distributive Property * Order of Operations * Radicals and Exponents * Solution * No solution | * Analyze * Write * Fluent/Fluency * Distinguish * Flexible * Covert * Define * Differentiate * Solve | * Interpret * Model * Represent * Describe * Effect * Explain * Compare * Contrast * Translate |
| **Concepts:**  **What Students Need to Know**:   * Proportional relationships * Unit rate * Slope (*m*) * Y-intercept (*b*) * Linear equations (*y* = *mx* and *y* = *mx* + *b*)   + Rational Number Coefficients   + One variable     - One solution     - Infinitely many solutions     - No solutions * Equations into simple forms   + Expanding Expressions   + Distributive property   + Combining Like terms | | **Skills:**  **What Students Need To Be Able To Do:**   * GRAPH (proportional relationships) * INTERPRET (unit rate as slope) * COMPARE (proportional relationships) * EXPLAIN (why slope is the same between any two points on a non-vertical line) * DERIVE (linear equations (*y* = *mx* and *y* = *mx* + *b*) * SOLVE (linear equations) * GIVE (example of linear equations) * TRANSFORM (equations) * EXPAND (expressions)   + Use (distributive property)   + Collect (like terms) | | |
| **Instructional Strategies/Formative Assessment:**   * Discuss the BIG Question as it fits within the context of the lesson during the week. * Encourage students to use “I CAN” statements * Develop learning targets that are student friendly * Discuss learning targets with students * Develop foundational understand of vocabulary * Collect evidence to show mastery * Adjust instruction as needed based on collected evidence * Use the 5 E’s : * Engage * Explore * Explain * Elaborate * Evaluate | | | | |
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|  | **Subject: Math**  **Grade Level: 8th**  **Unit Title: Functions** | | **Time frame Needed for Completion:**  **November 21, 2015 – February 3, 2017**  **41 Days** | | |
| **Unit 3** | Big Ideas:   1. Define, evaluate, and compare functions. 2. Use functions to model relationships between quantities.   ***Domain(s): FUNCTIONS***  ***Standard(s):***  ***8.F Define, evaluate, and compare functions.***  ***8.F.1.*** *Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of*  *ordered pairs consisting of an input and the corresponding output.1*  ***8.F.2.*** *Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*  ***8.F.3.*** *Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function A = s2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.*  ***8.F Use functions to model relationships between quantities.***  ***8.F.4.*** *Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.*  ***8.F.5****. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.* | | | | |
| **Mathematics Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | | | | |
| **Essential Question(s):**   * **How do you define functions?** * **How would you evaluate functions?** * **How would you compare and contrast the functions of the table, graphs and expressions?** * **How would you compare and contrast the properties of functions?** * **How can you use the functions in real world?** * **How do you know that the function is linear or non-linear?** * **How will you define slope?** * **How would you describe the functional relationship between two quantities?** | | | | |
| **Key Vocabulary:**  **(Content)** | | **Key Vocabulary:**  **(Academic)** | | |
| * Linear Function * Input * Output * Ordered pairs * Properties of functions * Algebraically * Graphically * Numerically * Verbal descriptions | * Algebraic expressions * Rate of change * Equations * Linear * Non-linear * Initial value * Table * Graph * Similar triangles | * Analyze * Write * Fluent/Fluency * Distinguish * Flexible * Covert * Define * Differentiate * Solve * Evaluate | * Interpret * Model * Represent * Describe * Effect * Explain * Compare * Contrast * Translate * Construct |
| **Concepts:**  **What Students Need to Know**:   * Functions   + Properties * Linear * Non-linear   + Input/Output   + Ordered pairs * Linear/functional relationship * rate of change * initial value (function) * table * graph * Similar triangles | | **Skills:**  **What Students Need To Be Able To Do:**   * COMPARE (functions)   + Algebraically   + Graphically   + Numerically in tables   + Verbal descriptions * CONSTRUCT (function)   + Model (linear relationship) * DETERMINE (rate of change and initial value of function) * READ (table or graph) * INTERPRET * *y* = *mx* + *b* * rate of change and initial value of function * GIVE (examples of non-linear functions) * DESCRIBE (functional relationship between two quantities)   + DRAW (graph from a verbal description) | | |
| **Instructional Strategies/Formative Assessment:**   * Discuss the BIG Question as it fits within the context of the lesson during the week. * Encourage students to use “I CAN” statements * Develop learning targets that are student friendly * Discuss learning targets with students * Develop foundational understand of vocabulary * Collect evidence to show mastery * Adjust instruction as needed based on collected evidence * Use the 5 E’s : * Engage * Explore * Explain * Elaborate * Evaluate | | | | |
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|  | **Subject: Math**  **Grade Level: 8th**  **Unit Title: Geometry** | | **Time frame Needed for Completion:**  **February 6, 2017 – March 31, 2017**  **38 Days** | | |
| **Unit 4** | **Big Idea:**   1. Understand congruence and similarity using physical models, transparencies, or geometry software. 2. Understand and apply the Pythagorean Theorem and volume. 3. Solve real-world mathematical problems involving volume of cylinders, cones, and spheres.   ***Domain(s): Geometry***  ***Standard(s):***  ***8.* *G Understand congruence and similarity using physical models, transparencies, or geometry software.***  ***8.G.1****. Verify experimentally the properties of rotations, reflections, and translations:*  *a. Lines are taken to lines, and line segments to line segments of the same length.*  *b. Angles are taken to angles of the same measure.*  *c. Parallel lines are taken to parallel lines.*  ***8.G.2****. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a*  *sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the*  *congruence between them.*  **8.G.*3****. Describe the effect of dilations, translations, rotations, and reflections**on two-dimensional figures using coordinates.*  **8.G.4***. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two dimensional figures, describe a sequence that exhibits the similarity between them.*  **8.G.5***. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*  ***8.G.6.*** *Explain a proof of the Pythagorean Theorem and its converse.*  ***8.G.7.*** *Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.*  ***8.G.8.*** *Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.*  ***8.G Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.***  ***8.G.9.*** *Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.* | | | | |
| **Mathematics Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | | | | |
| **Essential Question(s):**   * **How would you describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates?** * **How would you explain that a two-dimensional figure is similar to another if the second can be obtained from the first?** * **How would you describe a sequence that exhibits the similarity of two or more two-dimensional figures?** * **How would you compare and contrast the angle sum and exterior angles of triangles?** * **How would you explain the angles created when parallel lines are cut by a transversal?** * **How would you explain the properties of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates?** * **How would you explain that a two-dimensional figure is similar to another if the second can be obtained from the first by the sequence of rotations, reflections, and translations?** * **How would you describe a sequence that exhibits the similarity of two or more two-dimensional figures?** * **How can the Pythagorean Theorem be used to solve problems?** * **How might we use Pythagorean Theorem in everyday life?** * **How would you use the Pythagorean Theorem to find the distance between two points?** * **How would you derive a formula of the volume of cone from the volume of cylinder?** * **How would you compare** * **How would you use volumes of cones, cylinder, and sphere to solve real world and mathematical problems?** | | | | |
| **Key Vocabulary:**  **(Content)** | | **Key Vocabulary:**  **(Academic)** | | |
| * Rotation * Reflection * Translation * Dilation * Congruence * Similarity * Two dimensional figures * Pythagorean Theorem * Right Triangle * Hypotenuse * Square * leg * area * sum * difference * perimeter * formulas * Base | * Angle Sum * Exterior angle of triangles * Transversal * Parallel Lines * Square root * Converse * Height * length * Volume * Cones * Cylinder * Sphere * Pi * Radius * diameter | * Analyze * Write * Fluent/Fluency * Distinguish * Flexible * Covert * Define * Differentiate * Solve * Evaluate | * Interpret * Model * Represent * Describe * Effect * Explain * Compare * Contrast * Translate * Construct |
| **Concepts:**  **What Students Need to Know**:   * Rotation * Reflection * Translation * Dilation * Congruence * Similarity * Angle sum and exterior angle of triangles * Parallel lines cut by a transversal * Angles formed * Angle-angle criterion for similar triangles * Square Roots * Perfect Squares * Simplifying expressions * Informal proof * Formulas (volume) * Cones * Cylinders * Spheres | | **Skills:**  **What Students Need To Be Able To Do:**   * DESCRIBE (effect of dilations, translations, rotations and reflections using coordinates) * PROVE (informally) * angle relationships in parallel lines cut by a transversal * sum of angles in a triangle = 180° * Graph points on a coordinate plane * Express decimals as fractions in simplest forms * Use cross products to determine whether pairs of ratios form proportions * Classify real numbers * Use and compare real numbers * Simplify Expressions * Solve equations * Evaluate Expressions * Know (formulas for volumes) * Use (formulas for volumes)   Solve(in cont | | |
| **Instructional Strategies/Formative Assessment:**   * Discuss the BIG Question as it fits within the context of the lesson during the week. * Encourage students to use “I CAN” statements * Develop learning targets that are student friendly * Discuss learning targets with students * Develop foundational understand of vocabulary * Collect evidence to show mastery * Adjust instruction as needed based on collected evidence * Use the 5 E’s : * Engage * Explore * Explain * Elaborate * Evaluate | | | | |
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|  | **Subject: Math**  **Grade Level: 8th**  **Unit Title: Statistics & Probability** | | **Time frame Needed for Completion:**  **April 3, 2017 – May 12, 2017**  **24 days** | | |
| **Unit 6** | **Big Idea:**  Investigate patterns of association in bivariate data.  ***Domain(s): STATISTICS AND PROBABILITY***  ***Standard(s):***  ***8.SP Investigate patterns of association in bivariate data.***  ***8.SP.1*** *Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.*  ***8.SP.2****. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.*  ***8.SP.3.*** *Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*  ***8.SP.4.*** *Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?* | | | | |
| **Mathematics Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | | | | |
| **Essential Question(s):**   * **What mathematical processes and skills are used to investigate patterns of association in bivariate data?** * **How would you compare and contrast univariate and bivariate data?** * **When solving multi-step word problems using charts, tables, and graphs, how can you tell if the information is sufficient?** * **How do you interpret the data you have collected?** * **How can I use a scatter plot to draw informal inference about the correlation between two variables?** * **How can I create a scatter plot for data?** * **How can I use probability to make wise decisions in my life?** | | | | |
| **Key Vocabulary:**  **(Content)** | | **Key Vocabulary:**  **(Academic)** | | |
| * Statistics * Probability * Scatter Plot * Univariate * Bivariate * Patterns * Clustering * Outliers * Linear association * Nonlinear association | * Slope * Intercept * Variables * Frequencies * Equation of linear model * Quantitative variables * Line of best fit | * Analyze * Write * Fluent/Fluency * Distinguish * Flexible * Covert * Define * Differentiate * Solve * Evaluate | * Interpret * Model * Represent * Describe * Effect * Explain * Compare * Contrast * Translate * Construct |
| **Concepts:**  **What Students Need to Know**:   * Scatter Plots * Patterns * Clustering * Outliers * Positive or Negative * Linear * Nonlinear * Frequencies * Two-way table * variables * Equation of Linear Model * Slope and Intercept * Line of best fit | | **Skills:**  **What Students Need To Be Able To Do:**   * CONSTRUCT (scatter plots) * INTERPRET (scatter plots) * INVESTIGATE (patterns) * DESCRIBE (patterns) * USE (equation of a linear model) * SOLVE (in context) * INTERPRET (slope and intercept) * UNDERSTAND (patterns of association in data) * DISPLAY (frequencies and relative frequencies) * DESCRIBE (association between variables) * DRAW (line of best fit) | | |
| **Instructional Strategies/Formative Assessment:**   * Discuss the BIG Question as it fits within the context of the lesson during the week. * Encourage students to use “I CAN” statements * Develop learning targets that are student friendly * Discuss learning targets with students * Develop foundational understand of vocabulary * Collect evidence to show mastery * Adjust instruction as needed based on collected evidence * Use the 5 E’s : * Engage * Explore * Explain * Elaborate * Evaluate | | | | |
| **Recommended Assessments:**  Daily Formative Assessments  Collaborative Assessments  Common Formative Assessments  Weekly Teacher Made Assessments  Daily “DO NOW”  Student Products  NCDPI Indicators  Foldables  DPI Resources  Computer Programs  Compare and order a list of fractions, decimals and percents.  Justification Notebook | | | | |
| **Recommended Resources:**  **DPI website:** [**www.ncpublicschools.org**](http://www.ncpublicschools.org)  Week by Week Essentials  Keeping Skills Sharp  NCDPI Indicators  Math Stars  Instructional Resources  ClassScape  Common Core Unpacking the Standards  <http://tulyn.com/6th-grade-math/rational-numbers>  [www.khanacademy.com](http://www.khanacademy.com)  <http://www.studyzone.org/mtestprep/math8/e/compdec6l.cfm>  <http://www.superkids.com/aweb/tools/math/compare/>  <http://www.webmath.com/k8numlinecomp.html>  <http://www.learningwave.com/chapters/integers/numline.html>  <http://www.aaamath.com/g623_ex6.htm>  <http://www.aaamath.com/g623_ex7.htm>  [www.helpingwithmath.com](http://www.helpingwithmath.com)  <http://www.teachervision.fen.com/algebraic-expressions/printable/4334.html>  [www.internet4classrooms.com](http://www.internet4classrooms.com)  [www.helpingwithmath.com](http://www.helpingwithmath.com)  <http://www.ixl.com/math/grade-6/identify-representative-random-and-biased-samples>  <http://betterlesson.org/lesson/12478/tree-diagrams-fundamental-counting-principle>  <http://www.commoncore.org/_docs/math/6-8_curriculum_overview.pdf>  <http://www.livebinders.com/play/play/430659> | | | | |

Note: Review for EOG: All standards (May 15, 2017 – June 2, 2017)

EOG Testing: June 5, 2017 - June 9, 2017